What is claimed is:

1. An ultra-fine fibrous carbon characterized by stacking of carbon hexagonal planes having one or double directional growth axis with no continuous hollow core therein.

2. A fibrous carbon of claim 1, wherein

(1) carbon content is more than 95wt%; (2) the diameters range from 3.5 to 79.9 nm; (3) the aspect ratio (length per diameter) is more than 20; and (4) the carbon hexagonal planes align perpendicular to the fiber axis.

3. A fibrous carbon of claim 1, wherein

carbon content is more than 95wt%; the diameters range from 3.5 to 79.0 nm; the aspect ratio (length per diameter) is more than 20; and the carbon hexagonal planes align having 5 ~ 65° angle to the fiber axis.

4. A method for producing a fibrous carbon of claim 2, characterized by the steps of using carbon black-supported metal mixture or alloy catalysts, wherein the metal mixtures or alloys involve nickel as a major catalyst, and iron or molybdenum as secondary metals; the carbon black is characterized by less than $100m^2/g$ BET-surface area, 20 ~ 60 nm particle size, and more than 10wt% oxygen content; and the carbon black-supported catalyst contains 0.1 ~ 60wt% metal mixture or alloy per carbon black; and

of the carbon source being introduced at the flow rate of 0.5 ~ 40

sccm per 1 mg catalyst in the furnace, where the carbon source involves hydrocarbons containing 2 ~ 6 carbon atoms or mixtures of aforementioned hydrocarbons and hydrogen.

5. A method for producing a fibrous carbon of claim 3, characterized by the steps of using carbon black-supported metal mixture or alloy catalysts, wherein the metal mixtures or alloys involve nickel as a major catalyst, and iron or molybdenum as secondary metals; the carbon black is characterized by less than $100 m^2/g$ BET-surface area, 20 ~ 60 nm particle size, and more than 10wt% oxygen content; the carbon black-supported catalyst contains 0.1 ~ 60wt% metal mixture or alloy per carbon black; and

of the carbon source being introduced at the flow rate of 0.5 ~ 40 sccm per 1 mg catalyst in the furnace, where the carbon source involves hydrocarbons containing 2 ~ 6 carbon atoms or mixtures of aforementioned hydrocarbons and hydrogen.

6. A method according to claim 4, wherein

the hydrogen partial pressure in the mixture of hydrocarbons and hydrogen is selected between 0 ~ 80v/v%; the production temperature is selected between 300 ~ 499°C; and the production time is selected between 2 min ~ 12 h.

7. A method according to claim 5, wherein

the hydrogen partial pressure in hydrocarbons and hydrogen mixtures

is selected between 0 ~ 80v/v%; the production temperature is selected between 300 ~ 499°C; and the production time is selected between 2 min ~ 12 h.

8. A method according to claim 4, whereby

the carbon black-supported catalyst is alternatively treated as follows: oxidation to contain less than 1wt% carbon black at 300 ~ 500°C in oxidative gas containing 5 ~ 40v/v% oxygen or carbon dioxide in inert gases such as nitrogen, argon or helium; and repetitive reduction by 1 ~ 3 times in gas mixtures of 5 ~ 40v/v% hydrogen in nitrogen, argon or helium at 400 ~ 500°C for 1 ~ 48 h.

9. A method according to claim 5, wherein

the carbon black-supported catalyst is alternatively treated as follows: oxidation to contain less than 1wt% carbon black at 300 ~ 500°C in oxidative gas containing 5 ~ 40v/v% oxygen or carbon dioxide in inert gases such as nitrogen, argon or helium; and repetitive reduction by 1 ~ 3 times in gas mixtures of 5 ~ 40v/v% hydrogen in nitrogen, argon or helium at 400 ~ 500°C for 1 ~ 48 h.

10. A method according to claim 8, wherein

said alloy according to the alloy kind is composed of 0.1/0.9 ~ 0.95/0.05(wt/wt) of Ni/Fe; 0.05/0.95 ~ 0.95/0.05(wt/wt) of Ni/Co; and 0.1/0.9 ~ 0.9/0.1(wt/wt) of Ni/Mo.

11. A method according to claim 9, wherein

said alloy according to the alloy kind is composed of 0.1/0.9 ~ 0.95/0.05(wt/wt) of Ni/Fe; 0.05/0.95 ~ 0.95/0.05(wt/wt) of Ni/Co; and 0.1/0.9 ~ 0.9/0.1(wt/wt) of Ni/Mo.